Outgoing

M0350020

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State of Utah
DEPARTMENT OF NATURAL RESOURCES
Division of Oil, Gas & Mining

MICHAEL R. STYLER
Executive Director
JOHN R. BAZA
Division Director

March 6, 2008

Mr. Scott Hughes
Lakeview Rock Products, Inc.
P.O. Box 540700
Salt Lake City, Utah 84054-0700

Subject: Review of Draft Notice of Intention to Commence Large Mining Operations, Lakeview Rock Products, Inc., Beck Street, M/35/020, Salt Lake County, Utah

Dear Mr. Hughes:

The Division has reviewed the draft Notice of Intention to Commence Large Mining Operations for the Lakeview Pit submitted June 2007. Map Figures 3, 4, and 5 were not submitted. We used previously submitted maps in this review. Instructions must be provided if any previous materials are to be used in subsequent reviews.

In order to expedite the review process and to ensure Lakeview meets regulatory requirements, the following actions are suggested and/or required:

- Contact Division staff to discuss pertinent issues such as: maps, variances, slope stability study, hydrology, zoning, and pit configuration (Beth Ericksen 538-5318, Tom Munson 538-5321, and Paul Baker 538-5261). It may be necessary to arrange a series of meetings with specific individuals in addressing each topic separately.
- The additional reclamation surety amount of $108,218.00 *must* be submitted. This amount is considered an *interim* amount, which may be adjusted upon final approval. Please contact surety coordinator, Mr. Jed Pearson, 801-538-5382 to obtain information on how to submit the surety and the documents required, including a reclamation contract.

Please address only those items requested in the attached technical review at this time, unless there are new procedures, practices, and/or conditions that will affect the operation and reclamation plan. In addition, when your response is submitted, please submit a hard copy and an electronic version. After the notice is determined technically complete, public comment requested, and we are prepared to issue final approval, we will ask that you send us two clean copies of the complete and corrected plan. Upon final approval of the permit, we will return one copy stamped "approved" for your records.

Thank you for your cooperation in completing this permitting action.

Sincerely,

Susan M. White
Program Coordinator
Minerals Regulatory Program

SMW: BE: pb
Attachment: Review
cc: Jed Pearson, DOGM, (cover letter only)
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REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Lakeview Rock Products
Beck Street Quarry

M035020
February 14, 2008

R647-4-104 – Operator's, Surface and Mineral Ownership

Provide phone numbers of adjacent surface land owners

R647-4-105 - Maps, Drawings & Photographs

General map comments:

There are some general comments about maps, and some of the more significant maps have comments as shown below. The Division strongly suggests a meeting to review the submitted maps and identify additional maps that will be required. This meeting may provide answers regarding requirements and standards for completing the maps. Please schedule and coordinate with the lead, Beth Ericksen. (BE)

Please review each map and ensure that basic map requirements are met. Basic requirements are elements such as: title, north arrow, scale, legend, citations, etc. Major maps have been reviewed and general comments are provided under each map title, but refer to this general comment and ensure these general requirements are met. (BE)

Provide contour intervals in the legend. (BE)

None of the provided maps show with clarity access to the lower and upper mine areas from Beck St. Please provide this information on any of the map(s), but it would be most appropriate on a general information type map. (BE)

Show the locations of areas previously affected by mining with no reclamation liability since none are shown.(BE)

Show the bonded area on a map. If the bonded area is equal to the property boundary area, please indicate. (BE)

Label each map with acres, overall, and acres associated with each legend item when applicable. (BE)

Variance requests require maps showing the variance areas. These areas should be labeled and identified. For ease of identification, it is helpful to assign each variance request a reference number, and use it in the narrative and on the maps. This information may be repeated under Variance in this document. (BE)

Facilities Map: (BE)

More detail is required. It may be necessary to submit two maps because of the quantity of information on the existing map and the level of detail required. For example, the current map shows some rectangular shapes, which are assumed to be buildings, however, there is no legend identifying what they are (they need to be identified). Some of the rectangles are labeled, so they are clearly buildings, tanks, or equipment. The legend should reference every building and structure and the map should have them labeled accordingly (they are mostly complete). There appears to be several piles within the map as well but none of them are labeled either. These piles may be waste or topsoil, but currently unknown. Please ensure all elements are named, otherwise the communication success is deficient.

The elevations cannot be read. See above comment. The scale may need to be changed to incorporate all the detail required, resulting in producing and submitting two maps.

Make sure drainage controls structures and locations are shown and labeled.

Show and label solid waste management location(s)

Please label any and all equipment that is portable.

Include number of acres to be disturbed (in the legend). Also show the area to be disturbed on the map (this area may be different than the Lakeview boundary but should be the same as the bonded area).

The map shows an area 'drilling and blasting area', will that area remain a drilling and blasting area? Please indicate the permanence of that area, and include number of acres.

Figure 2: (BE)

Too much information is on this map, cannot read adjacent landowner information. Please include a separate map with this information only.

Show watersheds and provide legend reference. This information can be provided on a separate map.

Explain why there are a limited number of wells shown. Other information that is available to the Division reveal there may be more that what is shown.

Show with **clarity** all pipelines within 500 feet of the mining operations.

Final Pit Plan Map 5 (BE)

Please show the pit floor elevation. If it varies, provide that information as well.

The 'small berms' are not shown on each outer bench edge.

Please label the bench widths and bench heights or provide the information in the legend.

There is concern that there is not enough setback to contribute to overall stability for longevity. The 100 ft setback is a requirement for reasons other than stability. Please review this design as shown.

Please provide more information in the narrative about the final border staircased and inner-slope chevron pit configuration: what equipment will be used to achieve this shape? How will this configuration be achieved? Please note that this comment is in the 'map' section, however, please understand that a narrative may be required.

VIEW: Typical Bench Section, June 6, 2007

The figure labeled "VIEW: Typical Bench Section, June 6, 2007" should include the bench face angle and inter-ramp slope angle. Three "typical" sections should be shown in this figure, one for each of the proposed inter-ramp slope angles, i.e., 60° in the limestone, 50° in the siltstone and conglomerate, and 40° in the cemented gravel. (BE)

105.1 Topographic base map, boundaries, pre-act disturbance Drawings or Cross Sections (slopes, roads, pads, etc.)

Please provide supporting watershed and drainage maps corresponding to the referenced watershed calculations. (TM)

105.3.16.1 Baseline information maps (BE)

Provide an existing operations map, showing the areas that have been mined, area of disturbance with acres to the date that will be shown on the map, show contours and elevations.

Provide a final pit map. Are we including previous maps 3,4,5?

Please include boundary lines between Salt Lake City and North Salt Lake, include county boundary lines as well.

A geology map is required that identifies faults (strikes and dips), rock types, interbeds, and predominant joint (bedding and cross joints) orientations to help demonstrate generally stable pit wall configurations. The current and future disturbance areas should be superimposed on the map.

R647-4-106 - Operation Plan

106.2 Type of operations conducted, mining method, processing etc.

Describe the processing process and identify the equipment required. (BE)

Indicate the bench height and width that are created when mining down from the upper most bench. For clarification, the draft uses the verbiage, "a series of benches and highwalls remain", is the use of the word 'highwall' in the phrase mean bench height? What is the maximum slope height when creating a 'series of benches and highwalls'? (BE)

The submittal indicates that material is accessed through drilling and blasting. Typically, this mining method entails operational highwalls. If that is the case, more information is required describing the maximum height of all slopes that include highwalls and benches, the width of the benches, bench face width and maximum bench face angles. If there are highwalls, geologic explanation is required that summarizes among other pertinent concerns; their geologic orientation to maximize stability, weakness zones, and resistance to erosion. (BE)

There is no indication of an onsite explosives magazine or a caps magazine. Are there any blasting agents or magazines on site? If not, please provide more information about blasting. Is it contracted? (BE)

There is no mention of fueling and/or maintenance areas in the narrative nor is any of this type of information shown on the maps. Specific information is required that describes the location of the maintenance areas and where the deleterious materials are stored. There is a fuel tank on site, and it is assumed it is located in the fueling maintenance area, however the narrative is unclear regarding its location. It just indicates it is on-site. Is the tank on a concrete pad? If so, provide its dimension including thickness. Does fuel delivery occur through out the entire year or is it seasonal? How long will empty lube oil containers be on-site before they are properly disposed of? Please make a statement to the effect that all deleterious materials will be handled in accordance with state and federal requirements or indicate these requirements are met by reference to the SPCC Plan. (BE)

106.3 Estimated acreages disturbed, reclaimed, annually.
Please indicate the number of disturbed acres that occur annually. (BE)
Indicate the number of acres that will be reclaimed annually. (BE)

106.5 Existing soil types, location, amount
Please show the locations of soil stockpiles on a map. Please also include volume estimates for the stockpiles. (PBB)

In addition to above comment, provide overall slope dimensions. (BE)

Please include a map showing where the two different soil types are located. (PBB)

The plan needs to contain information about the chemical and physical nature of undisturbed soil and of material in areas that are previously disturbed. Would the materials in previously disturbed areas be suitable as growth media? (PBB)

106.6 Plan for protecting & redepositing soils

The plan says (Section 4.6) there are approximately 12 acres of relatively undisturbed ground in the area of proposed new mining but that no topsoil will be salvaged from this area because of steep slopes. (PBB)

The only areas where the operator intends to use any soil are on the safety berm and to reclaim the road on the east side of the property.
Please include acreage figures for the berm and road. How much soil is needed to reclaim these facilities? (PBB)

According to the plan, the topsoil piles are vegetated with volunteer species.
Are these species weeds? If so, efforts need to be made to establish desirable perennial species. (PBB)

106.9 Location & size of ore, waste, tailings, ponds

Provide the maximum volume of each of the product piles. Include the dimensions as well. (BE)

R647-4-108 - Hole Plugging Requirements

The operator has committed to follow the rules regarding drill hole plugging, but the plan does include information about drill holes. Any future drill holes need to be approved as part of the plan and the reclamation surety. (PBB)

R647-4-109 - Impact Assessment

General Comments

When addressing this section, please state the potential impacts that may occur as a result of mining operations. The draft NOI provides background, historical, conditional, and location information but does not indicate the impact of mining operations on the environmental factors that are described in R647-4-109. For example, in section 6.4.2, information is provided about runoff in terms of how precipitation falls on the highwall face, quantity, and some general run off behavior patterns, among other descriptions, but neglects to describe the impacts of mining operations regarding erosion. To develop this understanding further, an example: a mine operation has large disturbed land areas

(impact) and erosion control is a fundamental requirement. One could then identify that because of the nature of the mine's size, erosion and increased/altered sediment loading will occur. Impact locations would be identified among and outside of the large disturbance. These locations could be: roads, piles, local topographic variability, stream, drainages, and slopes to name a few. Finally, a description of the actions that will occur to mitigate the impacts associated with these sediment loading locations should be included. The impact of mining operations because of its large disturbed area would not be the only mining related impact regarding erosion. Another impact could be how the pit configuration creates erosion risks because of steep slopes in consolidated and unconsolidated materials. Again, once the environmental concern related to mining operations is identified, then mitigation measures, plans, and controls are developed via narrative, drawings and maps. The Division suggests using this approach with each of the environmental events in R647-4-109. (BE)

109.4 Slope stability, erosion control, air quality (fugitive dust control plan), public health & safety, surface and groundwater, threatened and endangered species, soil resources

Surface and groundwater

Lime Canyon Springs is used for dust suppression etc. as referenced on page 17 of the plan. Please state how the water gets to the property and is distributed. Please describe the potential impact the three springs will have on surface water or groundwater, flowing over or out of the pit slopes and/or highwalls. (TM)

Erosion control

Please provide the watershed calculations and the necessary documentation to support the statements within the impacts section that no attempts are needed to route water through, around, or within the property. If water ponds in the eastern portion of the property, please show that area on the appropriate operational map and how the water arrives in that area in a controlled manner. Concerns regarding the stability of the highwalls due to erosion are and continue to be a concern, please provide the necessary documentation to show this is not a significant problem with highwall stability. (TM)

Operationally, while various areas are being developed what methods are implemented to minimize erosion and provide adequate drainage? (BE)

Included the storm water pollution plan. (BE)

Provide information about how runoff is managed in the facilities area. (BE)

What methods are used to maintain pit roads and access roads to minimize erosion and runoff? No blocking or restrictions that impede drainage or adversely affects the road(s) should occur please provide verbiage containing this information. (BE)

What is the grade of the haul roads? If they vary, provide details such as the maximum grade and distance as well as the minimum grade. (BE)

Public Health and Safety

Section 6.4.6 does not provide information about the influence of mining operations in the public health and safety concerns related to access routes, and traffic. These concerns should be addressed. Furthermore, due to the proximity of the mine in an urban area, slopes stability should be addressed from this perspective as well. (BE)

Please provide hours of operations within all mine areas and indicate if operations are year-round. This information is necessary to develop an awareness of the impact to public health and safety.(BE)

Section 6.4.4 indicates that detritus will be properly disposed of within one year of cessation of mining operations. Detritus must be managed on an ongoing basis during active mining operations. Please commit to this or alternatively request a variance (R647-4-107.1.12). (BE)

Section 6.4.4 addresses public safety concerns and outlines some actions that will be implemented. One specifically identified action that the draft mentions is entrance gates will be locked at all access points. On a previous inspection it was discovered that this is not the case on the upper access point. To avoid citations, ensure the onsite actions are consistent with the plan verbiage. Please elaborate regarding the actions that will occur regarding highwall safety. The draft plan information is not consistent with what measures are taken at the site, or elaboration is required for clarity reasons. The upper highwall areas *do* have signs in place, however, the plan does not mention this action. In addition, the plan indicates there is a fence on the east property line. This fence has never been seen during inspection. Please be certain it is in place as outlined in the plan. *For determination of existing conditions, please provide a map that shows the placement of all public safety actions. (BE)*

Air Quality

Section 6.4.6 indicates an Approval Order has been granted. Provide a copy of the Air Quality Approval Order as an appendix to the plan including the dust control plan. More narrative is required about developing pit roads and how dust control is managed during that effort. Include the distance of the nearest current mine road locations to the pit boundary (in all directions). If this information is in the dust control plan, please indicate. If there are specific emissions requirements for any equipment, please provide a list of that equipment. (BE)

Slope Stability

If a mined area exists, but is not currently being worked, what measures are implemented to ensure it is environmentally stable? Is there a monitoring program in place to ensure slope stability regarding current slopes? (BE)

Outline the projected impacts to slope stability and what actions are implemented to mitigate the impacts. Please include in the narrative that the pit will be managed according to MSHA safety guidelines and the mining and reclamation plan. Also include information that supervisors or appropriate designated personnel will regularly monitor the slopes and benches. This information requested is not all-inclusive, as there are other important details that are required; specifically pertaining to the site geology, groundwater, and faulting. (BE)

Slope Stability Report IGES

Section 6.4.1, The fact that Lakeview Rock Products, Inc (or their predecessor) contracted with IGES to conduct this slope stability study is commendable, however, a number of potential problems with the IGES analyses, conclusions, and recommendations have been identified. Note the title of the October 7, 2004 IGES report includes the phrase "Preliminary Engineering Analyses." Other phrases used in this report including "preliminary analysis," "present level of data," "significant data gaps," "lack of substantive data," and "limited quantitative basis" indicate the general lack of comfort IGES had with the input parameters necessary to perform these stability analyses. (BE)

The IGES report *does not contain a plan map* of the proposed final pit design which was analyzed in this stability investigation. Unfortunately, without a plan map of the proposed pit, it is not possible to ascertain whether the current pit design resembles the pit wall analyzed by IGES in 2004. (BE)

Although the IGES report does not contain a geologic map of (i.e., a geologic projection to) the proposed pit, the sections on pages 4 to 9 illustrate the simplified geology that IGES modeled. (BE)

Based on descriptions in the Oct-04 IGES and Jun-07 JBR reports, the *cross section shown on page 9 (IGES, Oct-04)* is thought to represent the recommended final pit design configuration. The proposed slope is a compound slope with a 60° lower segment, 50° mid-section and 40° upper segment. The proposed cut slope height is 900-ft. The lowermost 450-ft section is composed of limestone at 60°. Above the limestone is a 200ft high section of siltstone at 50°. The siltstone is overlain by 75-ft of conglomerate at 50° which is capped by 17-5ft of cemented gravel excavated at 40°. Please provide clarification by indicating if the cross section represents final design configuration (BE)

R647-4-110 - Reclamation Plan

110.1 Current & post mining land use

According to a May 10, 2006, letter from Salt Lake City Corporation, the maps in the reclamation plan depict an excavation limit line that does not match the current zoning on the property of the proposed excavation limit line that Lakeview and the City have discussed. The Division understands the current open space zoning is 497 feet west of Lakeview's eastern property line, but the figures in the plan show the excavation limit closer than this. Please modify the plan so the excavation limits conform with current zoning requirements. (PBB)

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed

Please ensure cross sections in Figure 4 accurately represent the indicator lines. More information is needed, including tick marks on the x-axis and identifying each boundary line (purple). (BE)

The plan describes only the reclamation on the 'highwall' benches, but there is no highwall variance that has been granted by the Division. Until a variance is granted, the plan must show reclamation with final slopes at 45° and include a description of how it will be achieved. The current map that shows highwalls (figure 5) would be submitted with the variance request to assist its evaluation. (BE)

Provide more information about the preparation of the pit floor for seeding. (BE)

110.3 Description of facilities to be left (post mining use)

Please indicate any utility lines that may be left, or if they are removed in entirety, state that. (BE)

110.5 Revegetation planting program

The operator proposes to sample 10 representative areas of the pit floor for factors to determine the floor's ability to support growth. Depending on the results of these tests, amendments to the plan will be made to provide an acceptable growth medium. No topsoil will be stockpiled for use in reclamation of the pit floor.
Before evaluating this plan, the Division will await the response to comments under rules R647-4-106.5 and –106.6. (PBB)

Please see comments under rule R647-4-112 concerning the plan to seed the highwall benches just once. (PBB)

On page 27, the plan says manure would be applied to certain areas at the rate of five tons (dry) per acre. The Division discourages the use of manure, especially where salvaged soil is available, because this practice tends to increase weed growth. Manure may be appropriate for use on the pit floor if no topsoil is available. (PBB)

determines that revegetation has been accomplished within practical limits. Reasonable steps, as outlined in the plan, should be taken to revegetate the highwall benches. If the plan is followed and the benches do not have 70 percent of the premining vegetative ground cover or if it is impossible to measure vegetation cover, the Division can make a determination that revegetation has been accomplished within practical limits. For these reasons, the variance is not needed and the request needs to be removed from the plan. (PBB)

Per the above comment, ensure there is a reasonable method outlined in the plan for revegetation. Also know, there is not a highwall variance for this mine, so the revegetation of the highwalls cannot be outlined until the variance is issued. The revegetation plan should include planting 45° slopes. (BE)

The same reasoning applies to the success standards for the pit floor where the operator has requested that the standard be lowered from achieving 70 percent of the premining cover to only needing 60 percent of the premining cover. If the revegetation plan is followed and there is not enough vegetation cover, the Division can determine that revegetation has been accomplished within practical limits. This variance request should be removed from the plan. (PBB)

Please show this 12-acre area on a map and provide information about the slope steepness. If topsoil is not to be salvaged from some areas, the plan needs to include a variance request giving justification for the variance and showing what alternate methods will be used. (PBB)
Per above comment, the map should be a topographic map to scale with labeled elevations and contour intervals. (BE)

R647-4-113 – Surety

The surety amount determined includes the removal of any items listed in the variance section of this review, please include these items until a variance is approved. (BE)

Section 9.0 of the draft references the Means Heavy Construction Cost Data manual was used and the references are shown in appendix D. That is not the case, there are no reference numbers associated with each reclamation activity. This information must be included. (BE)

Provide specific source information for all costs. (BE)

The surety must be based on reclaiming the highwall area to 45 degrees or less, since a variance has not been granted. (BE)

Operations:

Provide size and quantity of water tanks. (BE)

Provide information about existing roads such as: lengths, widths, overall road acres, and names if they exist. (BE)

Please provide detailed information of machinery and equipment used at the location. This information can be submitted in table form, include type, quantity, and size of each piece used. (BE)

Indicate portable toilet quantity, if any. (BE)

Provide costs to remove material piles. (BE)

Please identify the size ranges of the product. (BE)

Reclamation:

The surety amount of $363,100.00 is currently inadequate based the submittal information. The Division has preliminarily determined that an additional $108,218,00 is required. This estimate includes escalation, contingency of 10%, overhead & profit, and post mine monitoring. This amount may be adjusted once the plan is adequate and a specific surety determination is made. (BE)

Please provide a complete list of equipment and vehicles, and their application. (BE)

Justify the statement 'estimate 25 out of 56 acres for clean up'. How and what contributes to this estimate? Where is the amount of $75/acre for trash removal obtained? There is no reference in the Cost Summary. The same applies to the loading/trucking. There is an estimate for number of trips, but the trash must be gathered and loaded on the equipment. There are no costs for that work including costs for workers to perform the loading work. In addition, there is no information about the vehicles used in the Cost Estimate. What is the quantity of trash (and your definition of trash)? There is no indication of dump fees. Generally speaking, these estimations are too vague. (BE)

In continuation of the above comment, the surety narrative includes cleaning and demolition within the trash category, so does the definition of trash consist of cleaning and demolition in addition to regular trash? (BE)

The building demolition lacks appropriate detail. What is the distance in miles to the disposal site? Where and how will the demolished materials be disposed of? What does the demolished debris consist of (metal, siding, gypsum etc)? What are the dump fees? What are the costs for gutting? If gutting isn't required, please specify. (BE)

Do the facilities have foundations? Information must be provided and made clear. If there are any foundations or concrete pads, a table must be provided with dimensions included thickness and volume. The costs should be determined that includes break-up the concrete and the disposal of it. (BE)

Does any of the portable equipment have concrete footers and/or slabs? (BE)

Are there fuel and/or oil tanks and maintenance area that requires removal? (BE)

There are water tanks, but there is no information regarding how the contents will be handled or where they will be emptied. (BE)

This information may be elsewhere in the review, costs are required to remove and dispose of power lines, poles and transformers. (BE)

Is there a lay-down area that requires removal and disposal of solid waste materials? (BE)
The costs associated with amending the soils are not included. (BE)

The Lakeview costs to relocate equipment do not specify distance traveled to relocation point. Please identify each cost: costs to load, cost of operator, cost of travel, cost of equipment etc. (BE)

The equipment list has no basis for $2000/pc of equipment for mob/demob. What size crane and track hoe will be used? (BE)

What are the infrastructure removal costs? It is expected there are costs associated with the removal of generators, pumps, gates and signs etc. They must be listed and show costs. (BE)

There are no monitoring costs associated with Revegetation and slopes. These costs must be included. (BE)

Provide dimensions of all bench surface areas. (for variance to leave highwall) BE

Escalation rate is 3.2% until April 2008. (BE)